REVIEWS OF BOOKS

BIOGRAPHY

Smith, Cecil Woodham. *Florence Nightingale.* London, 1950. Constable. Pp. 615. Price 15s.

THIS outstanding book should be read by all who are interested in genius, heredity, environment, humanity and progress. Those who have lost faith in the latter, or who pine for the " good old days," will benefit greatly from reading in detail of the vast amount accomplished by one woman in the face of almost insuperable difficulty and frustration. The help, sympathy and deep affection she received from most of the important people of her day was offset by the opposition and petty obstruction of the mediocre, who unfortunately form the majority. To understand the immense and complicated nature of Florence Nightingale's achievement and character, the book must be read in its entirety. For eugenists perhaps the most interesting and valuable part of the story is her inheritance—coming, as she did, from remarkable families on both sides. " Though her parents were both handsome, agreeable and intelligent, they were not a well-matched couple." But evidently the genes they passed on to Florence were wonderfully well assorted! Her mother had " great vitality, was indefatigable in the pursuit of pleasure, never tired unless bored, always good-natured unless thwarted, always kind unless her obstinacy were aroused. In the art of making people comfortable, in the arrangement of a house, the production of good dinners, she possessed genius." Moreover, " she came from a remarkable family. Her grandfather, Samuel Smith, had been a well-known character, celebrated for the riches he amassed as a London merchant and for his humanitarian principles. He had come to the assistance of Flora Macdonald when she was a penniless prisoner in the Tower in spite of the fact that he was a strong Hanoverian. . . . His son devoted his wealth to collecting pictures and fighting causes. For forty-six years he sat in the House of Commons fighting for the weak, the unpopular and the oppressed. He was a leading Abolitionist, he championed the sweated factory workers ; he did battle for the rights of Dissenters and Jews. . . . His children did not inherit his altruism," but this was, of course, his grand-daughter's greatest quality. She sacrificed herself and many others ruthlessly to every cause in which she believed. William Smith had ten children, " all good looking, all with immense zest for living and amazing health. He himself at eighty wrote he had " no recollection whatever of any bodily pain or illness." None of his ten children died before the age of 69, six lived to be over 80 and Florence's mother lived to be 92." Florence herself lived to be ninety years and three months.

Her father, W. E. Nightingale, "developed into a dilettante, rich, appreciative, indolent, charming. . . . As long as he had books and conversation he was indifferent to other pleasures." Yet " wild blood ran in his veins " and his forebears had been eccentric to the verge of madness. It is fascinating to see how all these strains were blended in Florence Nightingale and enabled her to carry out the great works to which she set her soul. Not only in this country, military and civilian, but in Europe and especially in India she achieved great reforms. She looked forward to the time when " the country could be handed back to the people of India endowed with the greatest blessing of Western civilization—health."

Florence Nightingale was a wonderful woman and this is a great book.

URSULA GRANT DUFF.

BIOLOGY

Demerec, M. (Editor). *Biology of Drosophila.* New York, John Wiley and Sons Inc. ; London, Chapman and Hall Ltd., 1950. Pp. x + 632. Price 80s.

STRICTLY speaking, this useful book should be entitled " The Anatomy and Development of Drosophila," and as such it will earn the

gratitude of all Drosophila workers, and arouse the envy of all geneticists using other organisms. The book contains six major sections of a morphological and embryological character which between them cover all important structural aspects of the fruit fly, mostly the species *Drosophila melanogaster*. These sections, although well documented by extensive bibliographies, are by no means mere compilations from the literature; they represent to a considerable extent the results of research carried out over a number of years to close the most important gaps in knowledge, and these were (and to some extent still are) surprisingly large. The book thus contains a good deal of information not published elsewhere, and in the completeness of the treatment of a single insect it will also be a useful and informative contribution to the entomological literature. The work is lavishly illustrated by 341 figures in the text, including numerous excellent photographs; the majority of the illustrations are originals. The six morphological sections are "Normal spermatogenesis in Drosophila" (K. W. Cooper), "The early embryology of Drosophila melanogaster" (B. P. Sonnenblick), "Histogenesis, organogenesis, and differentiation in the embryo of Drosophila melanogaster Meigen" (D. F. Poulson), "The postembryonic development of Drosophila" (Dietrich Bodenstein), "External morphology of the adult" (G. F. Ferris), and "The internal anatomy and histology of the imago of Drosophila melanogaster" (Albert Miller). The volume is concluded by a useful section on "Collection and laboratory culture" by Warren P. Spencer.

The publication of this book, naturally, does not say the last word on the anatomy and development of Drosophila. However, one of its functions, and perhaps not the least important of them, will be to direct attention to the gaps which still remain to be filled, and the controversial points which remain to be resolved. The book as a work of reference is an obvious "must" for every Drosophila worker, and few entomologists will be able to do without it. Unfortunately the high price will tend to restrict its circulation.

H. GRÜNEBERG.

Young, J. Z. *The Life of Vertebrates.* Oxford, 1950. Geoffrey Cumberlege. Pp. xv + 767. Price 42s.

As the title of this work indicates, it is not an ordinary text-book of vertebrate zoölogy. The long list of its predecessors includes works of a mainly morphological character; books in which the comparative-anatomical aspect and its evolutionary implications dominate the treatment; works on palæontology, on comparative embryology, on comparative physiology and on the natural history of vertebrates (though there is a lack of comprehensive works on comparative biochemistry and comparative histology). While the authors of these works, each in his special field, have often produced very useful text-books, the increasing specialization makes any synthetic treatment of vertebrate biology as a whole a truly formidable task. The present author has made "an attempt to define what is meant by the life of vertebrates and by the evolution of that life. Put in a more old-fashioned way, this represents an attempt to give a combined account of the embryology, anatomy, physiology, biochemistry, palæontology, and ecology of all vertebrates. One of the results of the work has been to convince me more than ever that these divisions are not acceptable. All of their separate studies are concerned with the central fact of biology, that life goes on, and I have tried to combine their results into a single work on the way in which this continuity is maintained."

This is indeed a Herculean undertaking for any single author, yet it must be said that Professor Young has acquitted himself admirably of his self-imposed task. The work is very readable and its influence in restoring a synthetic viewpoint to vertebrate biology is likely to be considerable. The work is excellently illustrated and well produced, and the price must be considered moderate by present-day standards. As the material could not all be accommodated in a single book, a companion volume dealing with mammalian structure, function and development is promised which will also include a survey of comparative embryology.